DICKENS SOLUTIONS

(REF – 21246)

WASTE MANAGEMENT PLAN

CADENCE PROPERTY GROUP

PROPOSED
RESIDENTIAL FLAT BUILDING
@
115-119 DERBY STREET
PENRITH

NOVEMBER 2021

Dickens Solutions Pty Ltd
(ABN 41 603 040 446)
1214 Botany Road, Botany NSW 2019
Telephone (Mb) 0400 388 996
Website: www.dickenssolutions.com.au E-mail: garry@dickenssolutions.com.au

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PART 1 – OVERVIEW AND PROPOSAL

1.1 INTRODUCTION

This Waste Management Plan (WMP) describes in detail the manner in which all waste and other materials resulting from the construction and on-going use of the building on the site are to be dealt with. A previous Demolition Waste management Plan has been prepared to address the Demolition Component of the development.

The aims and objectives of this WMP are to: -

1. Satisfy all State and Local Government regulatory controls regarding waste management and minimisation practices;
2. Promote the use of recyclable materials in the excavation, construction and on-going operation of the building;
3. Maximise waste reduction, material separation, and resource recovery in all stages of the development;
4. Ensure the design of waste and recycling storage facilities are of an adequate size, appropriate for the intended use of the building, hygienic with safe and manoeuvrable access:
5. Ensure that the provision of waste and recycling services to the completed buildings are carried out in an efficient manner, which will not impact negatively on the health, safety and convenience of all stakeholders.

The land on which the development is proposed is located within the Penrith City LGA.

This WMP is prepared in accordance with: -

1. Penrith Local Environment Plan 2010;
2. Penrith DCP 2014 – Part C5 – Waste Management;
3. All conditions of consent issued under the approved Development Consent;
4. The 'Better Practice Guide for Resource Recovery in Residential Flat Buildings, published by the NSW EPA (April 2019);
5. Current industry standards and practices for the storage and collection of waste within Residential Flat Buildings; and,
6. The objective of ensuring that all waste management facilities and collection services will provide an outcome that will be effective and efficient, as well as promote the principles of health, safety and convenience.

This Waste Management Plan has been prepared for the submission of an Application under the provisions of Section 4.55 of the EP&A Act 1979, to modify the approved Development Consent for the construction of a six (6) storey Residential Flat Building containing 62 x 1, 2, and 3 bed room units, over two (2) basement levels at 115-119 Derby Street, Penrith.

The original Consent was approved by Council under DA16/0137.03 on 9 November 2016. The proposed 4.55 Modification seeks to provide changes as detailed on pages 4 and 5 of the SEPP 65 Design Verification Statement prepared by Architex Architects dated 15 October 2021.

This WMP is dated 8 November 2021.

1.2 PROJECT & PROPERTY DESCRIPTION

PROJECT DESCRIPTION	**Six (6) x storey residential flat building**
NUMBER OF UNITS	**16 x 1 bed room units, 42 x 2 bed room units, and, 4 x 3 bed room units. Two (2) basement levels, and, Associated infrastructure.**
PROPERTY DESCRIPTION	**The development is to be constructed over three (3) existing Torrens Title allotments at: Lot 5, in DP24603, No 115 Derby Street, Lot 6, in DP24603, No 117 Derby Street, and, Lot 7, in DP24603, No 119 Derby Street, Penrith**
STREET ADDRESS	**115-119 Derby Street, Penrith.**
DIMENSIONS	**Refer to Plans**
AREA	**2,090sqm**
ZONING	**Zone R4 – High-Density Residential**
PLANNING INSTRUMENTS	**Penrith Local Environment Plan 2010 Penrith Development Control Plan 2014**

The site is located on the northern side of Derby Street, Penrith, with Doonmore Street to the west and Colless Street to the east, and covers three (3) upon which three (3) single storey dwellings exist – one on each lot.

The land upon which the development is proposed is located approximately 500m south-east of the Penrith CBD, and a similar distance south of the western Sydney railway line. It is also within close proximity to the Nepean Hospital and a short distance south of the Penrith High School.

The immediate surrounding area predominantly consists of a mix of low and medium density housing, with a number of medical and educational facilities, as well as recreation areas also located nearby.

The Western Sydney Motorway is approximately 1km south.

1.3 APPLICANTS DETAILS

APPLICANT	**Cadence Property Group Pty Ltd**
ADDRESS	**Suite 5 / 734 Victoria Road, Ryde. NSW. 2112.**
TELEPHONE	**1300 808 158**
E-MAIL	**info@cadencepg.com.au**

1.4 PROPOSAL

The proposal involves the construction of a six (6) storey Residential Flat Building containing 62 x 1, 2, and 3 bed room units, over two (2) basement levels.

Egress from the site is onto Derby Steet at the south-western frontage of the site.

A garbage chute has been incorporated into the building design. The chute is a dual chute for the reception of both waste and recycling material. All waste storage facilities areas are located in Basement 1 of the building.

All waste and recycling services to the development will be provided from within the site.

Council's waste and recycling collection contractor will provide all services.

Current structures on the site are: -

- No 115 Derby Street – a single storey timber framed fibro dwelling with a galvanised iron roof, rear porch, detached awning over paved area, metal shed, outbuilding, concrete strip driveway and paving, front and rear yard grassed areas, some trees and shrubs, and lapped and capped, metal, timber and wire perimeter fencing,
- No 117 Derby Street – a single storey timber framed fibro dwelling with a metal roof, detached timber framed fibro garage, metal shed, outbuilding, concrete strip driveway and paving, front and rear yard grassed areas, some trees and shrubs, and lapped and capped, metal, timber and wire perimeter fencing, and,
- No 119 Derby Street – a single storey timber framed and cladded dwelling with a tiled roof, rear timber deck, pavers, metal outbuilding, detached carport, concrete strip driveway and paved pathway, front and rear yard grassed areas, some trees and shrubs, and metal, timber and wire perimeter fencing.

The demolition component of the project has been detailed in a separate Demolition Waste Management Plan, which has been submitted to Council.

The project consists of: -

a) The excavation of the site to construct the basement levels for car parking and other services,
b) The construction of the building,
c) The provision of landscaping, open space, driveways, concrete pathways and other elements associated with the development, and,
d) The on-going use of the building.

PART 2 – DEMOLITION

2.1 DEMOLITION - GENERALLY

The demolition component of the project has been detailed in a separate Demolition Waste Management Plan, which has been submitted to Council.

PART 3 – CONSTRUCTION

3.1 CONSTRUCTION – GENERALLY

Upon completion of all demolition works, construction of the building will commence with the excavation of the site for the basement levels of the building. All materials sourced from these activities will be disposed of in accordance with the information provided in Part 3.2 on pages 7, 8, 9, 10, 11 and 12 of this WMP.

Additionally, all materials used in the construction of the building that are not required to be incorporated into it, shall be recycled, reused or disposed of in accordance with these provisions, and the requirements of the Protection of the Environment Operations Act (1997). It will be the developer's overall responsibility to ensure compliance in this regard.

Mobile Bins of an appropriate size will be located on site for the collection of food scraps, beverage containers, and other waste generated on site by workers.

3.2 CONSTRUCTION – RECYCLING, REUSE & DISPOSAL DETAILS

The following details prescribe the manner in which all materials surplus to the construction of the building will be dealt with, and includes: -

a) An estimate of the types and volumes of waste and recyclables to be generated;
b) A site plan showing sorting and storage areas for construction waste and vehicle access to these areas (see Part 3.3 of this Plan);
c) How excavated and other materials surplus to construction will be reused or recycled and where residual wastes will be disposed (see below); and,
d) The total percentage of waste surplus to construction to be reused or recycled.

1. Excavated Materials

Volume / Weight	12,300 cubic metres / 20,910 Tonnes
On Site Reuse	No. All excavated material will be removed from the site and transported and disposed of to an approved landfill site.
Percentage Reused or Recycled	To be determined (see above comments)
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), or, Other approved Facility.

2. Bricks

Volume / Weight	5 cubic metres / 6.5 Tonnes
On Site Reuse	Nil – all bricks will be processed off-site
Percentage Reused or Recycle	75% - 90%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), or, Other approved Facility.

3. Concrete

Volume / Weight	5 cubic metres / 12 Tonnes
On Site Reuse	Existing driveway to be retained during construction. Crushed and used as aggregate, drainage backfill.
Percentage Reused or Recycled	60% - 75%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), or, Other approved Facility.

4. Timber

Volume / Weight	5 cubic metres / 7 Tonnes
On Site Reuse	Re-use for formwork and studwork, and for landscaping
Percentage Reused or Recycled	65% - 90%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112.

5. Plasterboard & Fibro

Volume / Weight	6 cubic metres / 3 Tonnes
On Site Reuse	No. All excavated material will be removed from the site and transported and disposed of to an approved landfill site.
Percentage Reused or Recycled	To be determined
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), or, Suez Recycling Centre, 1725 Elizabeth Drive, Kemps Creek Tel 1300 651 116.Ecocycle, 155 Newtown Road, Wetherill Park

6. Metals / Steel / Guttering & Downpipes

Volume / Weight	5 cubic metres / 1.25 Tonnes
On Site Reuse	No
Percentage Reused or Recycled	60 – 90%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), or, Suez Recycling Centre, 1725 Elizabeth Drive, Kemps Creek Tel 1300 651 116.

7. Roof Tiles / Tiles

Volume / Weight	5 cubic metres / 3.75 Tonnes
On Site Reuse	No. All excavated material will be removed from the site and transported and disposed of to an approved landfill site.
Percentage Reused or Recycled	80% - 90%
Off Site Destination	Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), or, Suez Recycling Centre, 1725 Elizabeth Drive, Kemps Creek Tel 1300 651 116.

8. Plastics

Volume / Weight	6 cubic metres / 1 Tonne
On Site Reuse	Nil
Percentage Recycled	80% - 95%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), or, Suez Recycling Centre, 1725 Elizabeth Drive, Kemps Creek Tel 1300 651 116.

9. Glass, Electrical & Light Fittings, PC items

Volume / Weight	5 cubic metres / 1.5 Tonne
On Site Reuse	No
Percentage Reused or Recycled	70% - 90%
Off Site Destination	To an approved agency, or agencies.

10. Fixture & Fittings (Doors Fittings, Other Fixtures, etc)

Volume	12.5 cubic metres / 4 Tonnes
On Site Reuse	No. All excavated material will be removed from the site and transported and disposed of to an approved landfill site.
Percentage Reused or Recycle	80% - 90%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), or, Suez Recycling Centre, 1725 Elizabeth Drive, Kemps Creek Tel 1300 651 116.

11. Pallets

Volume / Weight	50 cubic metres / 8 Tonne
On Site Reuse	No
Percentage Reused or Recycle	90% - 100%
Off Site Destination	To an approved agency, or agencies, for reuse and resale.

1. Residual Waste

Volume / Weight	1,300 cubic metres / 1,300 Tonnes
On Site Reuse	No
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), or, other authorised facility
Notes on calculation of volume of residual waste	1. In calculating the amount of residual waste produced from the demolition of all buildings on site, it is estimated that approximately 10% of it, will be residual waste. 2. As all of the materials vary in weight per volume, a figure of 1 cubic metre of material is equal to 1 tonne in weight has been used.

It is noted that the quantities of materials detailed in this section (Part 3.2) are estimates only, based on current industry standards and quantity analysis, and may vary due to the prevailing nature of construction constraints, weather conditions, and any other unforeseeable activities associated with the construction of the buildings, which are beyond the control of the developer, including but not being limited to theft, accidents, and other acts of misadventure.

Notwithstanding any of the above, the developer will provide Council with all details in relation to any major variations in this regard.

The developer will keep a record of all documentation associated with the transportation, disposal and processing of all materials surplus to the construction of the building.

Should any of the facilities nominated above, for any reason be unable to accommodate the receipt of these materials, the developer will be responsible for making alternative arrangements that will ensure that all materials, excess to construction requirements, that are removed from the site are disposed of, or processed, appropriately.

Additionally, during the construction of the building, every effort will be made to reduce and minimise the amount of building materials excess to its construction.

3.3 CONSTRUCTION – ON SITE STORAGE OF MATERIALS

During the construction of the buildings, an area will be set aside on the site as a compound for the on-site storage of materials prior to their removal from the site. This compound will provide for: -

a) Material sorting;
b) Segregation of materials that may be hazardous and which will be required to be disposed of;
c) Recovery equipment, such as concrete crushers, chippers, and skip bins;
d) Material storage; and,
e) Access for transport equipment.

Appropriate vehicular access will be provided on and off site, and to the compound, to enable the efficient removal of reusable, recyclables, and waste materials.

Prior to the commencement of construction works, the developer will provide Council with a 'Site Plan for the On-Site Storage of Materials at Construction'. This plan will show in detail the location of each area within the compound, set aside for the segregated storage of all materials involved in the demolition of all buildings on the site.

3.4 CONSTRUCTION – EXCAVATED MATERIAL

All excavated material removed from the site, as a result of any activities associated with the construction of the building, must be classified in accordance with the Department of Environment, Climate Change and Water NSW Waste Classification Guidelines prior to removal, transportation and disposal to an approved waste management facility.

All relevant details must be reported to the PCA.

PART 4 – GARBAGE CHUTE SYSTEM

4.1 DESIGN REQUIREMENTS

A garbage chute has been incorporated into the building design. The chute system will be a dual chute for the reception of both waste and recycling material. All waste chute infrastructure and waste storage facilities areas are located in Basement 1 of the building.

Each Garbage Chute System will contain two (2) separate chutes: -

- one for the reception and transfer of waste; and,
- one for the reception and transfer of recyclables.

All waste deposited into the waste chutes will discharge into 1100 mobile bins placed onto a two (2) bin mechanically operated linear track system in the bin/chute room in located in Basement 1 as indicated on the Architectural Drawings.

All recyclable material deposited into the recycling chutes will discharge into 1100 mobile bins placed onto a two (2) bin mechanically operated linear track system in the bin room located in Basement 1 as indicated on the Architectural Drawings.

Each chute will be located adjacent to one another in a 'Chute Compartment'. Chute compartments will be located on each residential floor of the building.

At a minimum each Garbage and Recycling Chute System will be designed to meet the following requirements: -

1. Chutes and service openings must be constructed of metal or other smooth faced, durable, fire resistant and impervious material of non-corrosive nature.
2. Chutes will be cylindrical in section with a minimal internal diameter of 500 mm. The diameter around each chute will be a minimum width of 750 mm to allow for infrastructure fittings, such as fixing brackets and noise insulation.
3. Chutes will be vertical without bends or "off-sets" (except for the chute outlets) and not be reduced in diameter.
4. The waste chute will terminate in the Bin/Chute Room located in Basement 1 and discharge all waste into an 1100-litre receptacle placed onto the two (2) Bin Linear track system.
5. The recycling chute will terminate in the Bin/Chute Room located in Basement 1 and discharge all recyclable material into an 1100-litre receptacle placed onto the two (2) Bin Linear track system.
6. The Chute and service openings must be capable of being easily cleaned.
7. Chutes must be ventilated to ensure that air does not flow from the chute through any service opening.
8. The Garbage Chute systems must comply with the relative provisions of the Building Code of Australia, and relevant Australian Standards (e.g., AS1530.4-2005).
9. All Linear Bin Systems will be designed, manufactured and installed in accordance with relevant Australian Standards and to manufacturers specifications.

4.2 WASTE CHUTE SYSTEM

A 'Chute Compartment' is provided to floor level of the building. Each chute compartment is located on the northern side of the South Lobby as indicated on the Architectural Drawings.

The two (2) chutes will be installed in a fire rated chute compartment. Each chute will be fire separated in accordance with the relative provisions of the BCA.

Residents will deposit waste material into the chute inlet hopper, labelled **'Waste Chute – Reception of Garbage Only'**. Waste from the chute outlet will fall directly into the middle bin on a 2 x 1100 litre mobile waste bin linear track system located under the Waste Chute Outlet in the RWSA which is located in Basement 1 as indicated on the Architectural Drawings.

Based on Council's waste generation rates (61.2-litres of space per unit per week), it is anticipated that the 62 units will generate 3,794.40-litres of waste per week, or 542.06-litres per day.

The capacity of the two (2) full 1100-litre bins on the track system is 2,200-litres. The chutes will be inspected at least one (1) time every day in order to ensure that waste receptacles will be removed when full.

Representatives of the Owners Corporation will monitor all activities associated with the use and operation of the chute system, the depositing of waste into it, and the operation of the linear track system, in order to ensure that there will be no spillage as a result of these activities, and that the system operates effectively.

Representatives of the Owners Corporation will be responsible for transferring full 1100-litre waste bins from the under the chutes into the waste bin storage area of the bin/chute room.

4.3 RECYCLING CHUTE

Residents will deposit waste material into the chute inlet hopper, labelled '**Recycling Chute – Reception of Recycling Material Only'**. Recycling material from the chute outlet will fall directly into the middle bin on a 2 x 1100 litre mobile recycling bin linear track system located under the Recycling Chute Outlet in the bin/chute room which is located in Basement 1 as indicated on the Architectural Drawings.

Based on Council's recycling generation rates (61.2-litres of space per unit per week), it is anticipated that the 62 units will generate 3,794.40-litres of waste per week, or 542.06-litres per day.

The capacity of the two (2) full 1100-litre bins on the track system is 2,200-litres. The chutes will be inspected at least one (1) time every day in order to ensure that recycling receptacles will be removed when full.

Representatives of the Owners Corporation will monitor all activities associated with the use and operation of the chute system, the depositing of recycling material into it, and the operation of the linear track system, in order to ensure that there will be no spillage as a result of these activities, and that the system operates effectively.

Representatives of the Owners Corporation will be responsible for transferring full 1100-litre recycling bins from under the chutes, into the recycling bin storage of the bin/chute room.

4.4 LINEAR BIN TRACK SYSTEM

The Linear Track System is to be designed, manufactured and installed strictly in accordance with applicable Australian Standards and to manufacturers specifications. The systems are to be monitored and serviced on a regular basis.

Any breakdowns or system malfunctions are to be attended to and addressed immediately. In the event of any system breakdown, the Owners Corporation shall make immediate alternative arrangements to ensure that there is no disruption to the provision of scheduled waste and recycling services, and that any spillage from the bins is removed and cleaned up immediately.

As required by the provisions of Section 3.5.2 of Council's 'Residential Flat Building Waste Management Guideline', sufficient space is provided around the linear tracks (900mm on the sides and 1.8m at the end) to allow for maintenance of the system and the movement of bins on and off the tracks.

4.5 ON GOING MANAGEMENT & MAINTENANCE OF CHUTE SYSTEM

The Owners Corporation will be responsible for all issues associated with the on-going management and maintenance of the Garbage Chute Systems.

These activities will include, but not be limited, to the following: -

1. Displaying signage indicating appropriate use of all waste management systems, including what is and what is not recyclable.
2. Educating residents in the correct use of the chute, and the need to keep bulky items out of the chute systems.
3. Providing regular maintenance, including cleaning and unblocking chutes.
4. Regular inspection of the Garbage Chute Compartments, the Garbage Chute Outlet Compartments, and the Bin Rooms to ensure that all waste and recyclables are managed appropriately.
5. Educating residents in the correct use of each chute, to ensure that waste material is not deposited into the recycling chute, and that recycling material is not placed into the waste chute.

In accordance with Council requirements, the following infrastructure will be incorporated into the design of all chute rooms: -

1. Suitable door access for the service of bins;
2. Where roller doors are provided, an additional service door will be provided inclusive of an Abloy key system;
3. All floors will be finished with a non-slip and smooth and even surface covered at all intersections;
4. The floor will be graded to a central drainage point connected to the sewer;
5. The room will be fully enclosed and roofed with a minimum internal room height in accordance with the BCA 2016
6. The room is to be provided with an adequate supply of water through a centralised mixing valve with hose cock; and.
7. Incorporation of adequate light and ventilation to meet the requirements of the BCA 2016.

PART 5 – ON GOING USE OF BUILDING

5.1 OBJECTIVES

1. To ensure that the storage, amenity and management of waste is sufficient to meet the needs of the development.
2. To ensure that all waste management activities are carried out effectively and efficiently, and in a manner that promotes the principles of health, safety and, convenience.
3. To promote waste minimisation practices.

5.2 ASSUMPTIONS

In preparing this proposal, the following assumptions have been made: -

1. The proposal involves the construction of a six (6) storey Residential Flat Building containing 62 x 1, 2, and 3 bed room units, over two (2) basement levels.
2. A Garbage Chute System will be incorporated into the development.
3. The chutes will be dual chutes for the reception of both waste and recyclables.
4. Waste and Recycling Chute Compartments will be provided to all cores on all residential levels for the use of residents to deposit both waste (into the garbage chute) and recyclable material (into the recycling chute).
5. All waste material deposited into the chutes will discharge into the middle waste bins located on a 2 x 1100-litre mobile bin Linear track system, installed within the Bin/Chute Room in Basement 1 of the buildings, as indicated on the Architectural Drawings.
6. All recycling material deposited into the chutes will discharge into the middle recycling bin located on a 2 x 1100-litre mobile bin Linear track system, installed within the Bin/Chute Room in Basement 1 of the buildings, as indicated on the Architectural Drawings.
7. In order to meet Council's servicing requirements, all waste will be stored in 4 x 1100-litre mobile bins.
8. In order to meet Council's servicing requirements, all recycling will be stored in 4 x 1100-litre mobile bins.
9. All waste services will be provided weekly.
10. All recycling services will be provided weekly.
11. The number and size of bins have been calculated from information provided by Penrith City Council, by Council staff and from information Penrith City Council's Residential Flat Building Developments Waste Management Guidelines Part 3.4 'Waste Generation Rate Calculations for 1100-litre Bin Allocation – Page 12'.
12. The Bin/Chute Room is located on the western side of Basement 1, as indicated on the Architectural Drawings.
13. All waste and recycling collections will take place from the dedicated loading bay located adjacent to the bin room, as indicated on the Architectural Drawings.
14. All waste and recycling collections will be provided by Penrith City Council in accordance with their service requirements and collection schedule.
15. The Owners Corporation will appoint a Building Manager or Caretaker who will be responsible for the management and maintenance of all activities associated with the storage and collection of waste and recycling.

5.3 WASTE HANDLING & MANAGEMENT

A cabinet will be located within each residential unit so that a receptacle, or receptacles, may be stored or housed in a convenient and practical location within the unit, for the reception of waste and recyclable material.

All waste and recyclables should be appropriately bagged or wrapped prior to being deposited into the designated garbage chute or recycling bin.

5.4 WASTE & RECYCLING – SERVICE REQUIREMENTS

All waste and recycling materials will be stored in approved receptacles of an appropriate size as specified in this WMP. The lids of the bins shall be closed at all times to reduce litter, stormwater pollution, odour and vermin.

The Council in general requires that colour coded receptacle lids that distinguish each service component are to be provided: -

- Waste Service – Red Lidded receptacle;
- Recycling Service – Yellow Lidded receptacle; and,
- Green Waste – Green Lidded receptacle.

No formal green waste service will be provided to the building. All green waste will be disposed of privately by a contractor to be appointed by the Owners Corporation.

It will be the responsibility of the Owners Corporation to ensure that all green waste is removed from the complex in an appropriate manner.

5.5 WASTE & RECYCLING – SERVICE ARRANGEMENTS

The following table (Table 1) specifies the criteria for waste and recycling generation rates (as specified by Penrith City Council) based on: -

- Waste – 18 dwellings (units) or 61.2-litres of bin space per unit per week; and,
- Recycling – 18 dwellings (units) or 61.2-litres of bin space per unit per week.

All waste and recycling generation rates were obtained from discussions with and advice from Council staff, and from information contained in Penrith City Council's Residential Flat Building Developments Waste Management Guidelines Part 3.4 'Waste Generation Rate Calculations for 1100-litre Bin Allocation – Page 12'.

TABLE 1 – RESIDENTIAL WASTE & RECYCLING GENERATION RATES

SERVICE TYPE	UNITS	BIN SPACE PER UNIT	TOTAL SPACE REQUIRED	BINS SIZE	SERVICES PER WEEK	BINS REQUIRED	BINS PROVIDED
Waste	62	61.2	3,794.40	1100	1	3.45	4
Recycling	62	61.2	3,794.40	1100	1	3.45	4

The following table (Table 2) specifies the proposed bin servicing requirements for the building and is based on the above waste and recycling generation rates: -

TABLE 2 – PROPOSED SERVICING ARRANGEMENTS

WASTE	RECYCLING
4 x 1100-litre bins Service one (1) day per Week	4 x 1100-litre bins Serviced one (1) day per Week

5.6 PROVISION OF WASTE & RECYCLING SERVICES

5.6.1 Waste and Recycling Collection Service Provider Details

Penrith City Council's waste and recycling contractors will provide all waste and recycling services to the building.

5.6.2 Bin Assignment Arrangements & Details of Mobile Containers

In relation to the size and design of the waste and recycling mobile bins, the following technical information is provided: -

CONTAINER TYPE	HEIGHT (metres)	DEPTH (metres)	WIDTH (metres)
1100 litre mobile container	1.470	1.070	1.240

In order to satisfy Council's requirements in terms of the assignment of bins to the development, the following arrangements will be made: -

1. Waste Bins – in addition to the 4 x 1100 litre mobile waste bins required by Council as part of their service requirements, the Owners Corporation will provide an additional number of 1100 litre mobile waste bins in order to ensure that a bin is provided at all times below the Waste Garbage Chute Outlet, and,
2. Recycling Bins – in addition to the 4 x 1100-litre mobile recycling waste bins required by Council as part of their service requirements, the Owners Corporation will provide an additional number of 1100 litre mobile waste bins in order to ensure that a bin is provided at all times below the Recycling Chute Outlet.

5.6.3 Waste & Recycling Requirements

Waste and recycling requirements are provided in the table below.

SERVICE	NUMBER OF CONTAINERS	COLLECTION FREQUENCY
Waste Service	4 x 1100- litre mobile containers	Weekly
Recycling Service	4 x 1100-litre mobile containers	Weekly

5.6.4 Location, Design, and Construction of Waste Storage and Collection Areas

Details of all storage and collection areas are provided below.

5.6.4.1 Chute Compartments

Waste and recycling Chute Compartments are provided on all residential floor levels of the building. Each compartment will have dimensions of 2.0m x 1.0m, with a floor area of 2.0 square metres, and will provide space for: -

- Garbage Chute compartment, which will have internal dimensions of 750 mm x 750 mm. The Garbage Chute will be installed within these confines in a fire rated compartment; and,
- Recycling Chute compartment, which will have internal dimensions of 750 mm x 750 mm. The Garbage Chute will be installed within these confines in a fire rated compartment.

Residents will deposit waste into the garbage chute and recyclable material into the recycling chute.

5.6.4.2 Bin Room/Chute Room

The Bin/Chute Room is located on the western side of Basement 1, adjacent to the driveway as indicated on the Architectural Drawings. Within its confines is a Garbage Chute Outlet Compartment for the reception of all waste and recycling material derived from the dual chute system in this core of the building.

All waste material deposited into the chutes will discharge into the middle bin of a 2 x 1100-litre mobile bin linear track system.

All recycling material deposited into the chutes will discharge into the middle bin of a 2 x 1100-litre mobile linear track system.

Within the confines of the room will be areas for: -

- The waste and recycling chute outlets,
- 2 x 1100-litre bin linear track systems for the waste bins,
- 2 x 1100-litre bin linear track systems for the recycling bins,
- An appropriate number of spare bins, and,
- Appropriate infrastructure.

According to the architectural drawings the size and design of the Bin/Chute Room is a fully enclosed rectangular structure, measuring 6.8m x 5.0m, with an area of approximately 34 square metres

As required by the provisions of Section 3.5.2 of Council's 'Residential Flat Building Waste Management Guideline', sufficient space is provided around the tracks (900mm on the sides and 1.8m at the end) to allow for maintenance of the system and the movement of bins on and off the tracks.

5.6.4.3 Waste Collection Area / Loading Bay

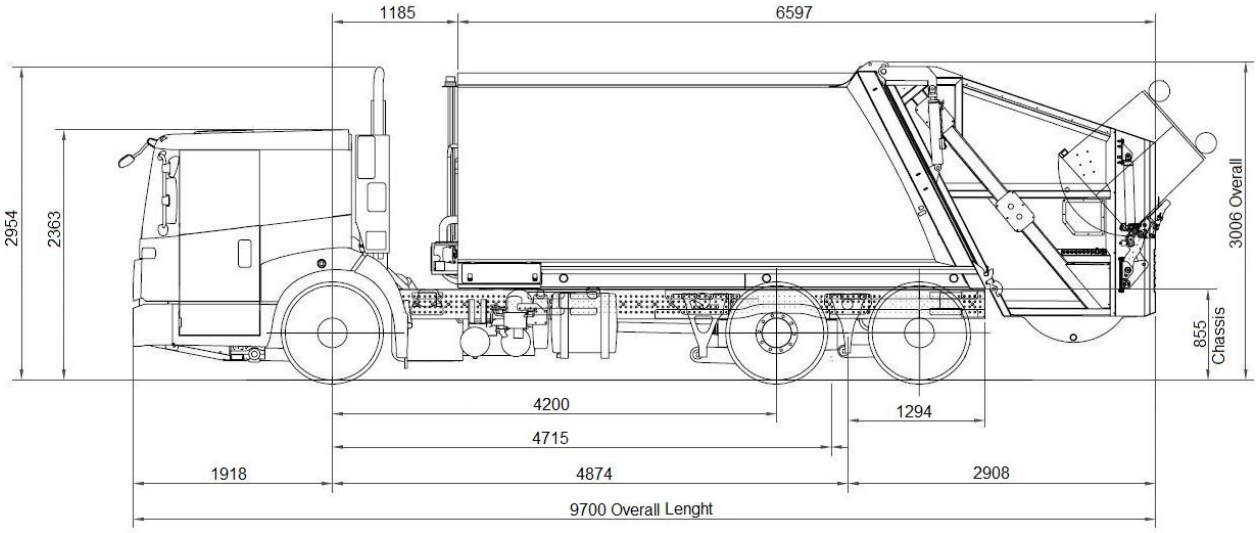
All waste and recycling bins will be serviced from a loading bay in Basement 1 adjacent to the Bin Storage Area.

The collection area has been designed to ensure that collection vehicles can enter and leave the site in a forward direction. Once into the basement the vehicle will reverse into the loading bay in accordance with the Swept Path Analysis

The collection area has been designed to accommodate Rear Loading Waste Collection Vehicle with the following dimensions:

- Operational Length – 9.70m;
- Design Width – 2.8m;
- Operational Height – 3.1m; and,
- Swept Circle – 17.0m.

Vehicle Specification on page 20.



All electrical equipment, including the provision of lighting, will be installed in accordance with the relevant Australian Standards.

All collection and servicing activities will take place wholly within the confines of the collection area from a designated collection point, where all waste and recycling bins will be removed from the adjacent storage area and presented for servicing.

The area has been designed to ensure that all collection activities do not interfere with the movement of traffic both in and out of the basements below. All vehicle movements will be conducted in accordance with the Traffic Management Report which will accompany the Section 4.55 submission.

5.6.4.4 Bin Room Infrastructure

In accordance with Council requirements, the following infrastructure will be incorporated into the design of all chute and bin rooms, and waste storage and collection areas: -

1. Suitable door access for the service of bins;
2. Where roller doors are provided, an additional service door will be provided inclusive of an Abloy key system;
3. All floors will be finished with a non-slip and smooth and even surface covered at all intersections;
4. The floor will be graded to a central drainage point connected to the sewer;
5. The room will be fully enclosed and roofed with a minimum internal room height in accordance with the BCA 2016
6. The room is to be provided with an adequate supply of water through a centralised mixing valve with hose cock; and.
7. Incorporation of adequate light, ventilation and acoustic attenuation treatments, in accordance with the Building Code of Australia.
8. All waste collection room (in accordance with the provisions of Section 3.5.2 of Council's Waste Management Guidelines) will be provided with 1.8 metre outwards opening self-closing sealed dual door access, be fully enclosed, walled and not provide through access to other waste infrastructure.

5.6.4.5 Resident Access to Bin Rooms

Access to all waste storage facilities will not be accessible to residents.

5.6.5 Servicing Arrangements – Waste Collections

All waste services will be provided by Penrith City Council's waste collection contractor, using a rear loading collection vehicle, that will enable all collections to be carried out effectively and efficiently, and in a manner, that will aim not impact negatively on the principles of health, safety or convenience.

In accordance with Penrith Council's requirements for 'on-site collections' for large residential flat buildings of this type, Council's waste collection contractor will collect the bins directly from the bin room adjacent to the loading bay and empty the contents of the bins into the collection vehicle.

According to Council's collection schedule, waste services are provided to this area weekly, on a day to be determined by the Council.

The waste bins will be returned to the storage area as soon as practicable after they have been serviced.

All 4 x 1100-litre mobile waste bins will be serviced on each collection day.

5.6.6 Servicing Arrangements – Recycling Collections

All recycling services will be provided by Penrith City Council's recycling collection contractor, using a rear loading collection vehicle, that will enable all collections to be carried out effectively and efficiently, and in a manner, that will aim not impact negatively on the principles of health, safety or convenience.

In accordance with Penrith Council's requirements for 'on-site collections' for large residential flat buildings of this type, Council's recycling collection contractor will collect the bins directly from the bin room adjacent to the loading bay and empty the contents of the bins into the collection vehicle.

According to Council's collection schedule, recycling services are provided to this area weekly.

The recycling bins will be returned to the storage area as soon as practicable after they have been serviced.

All 4 x 1100-litre mobile recycling bins will be presented for servicing on each collection day.

5.7 GREEN WASTE

No formal green waste service will be provided to the development.

It will be the responsibility of the Owners Corporation to ensure that all green waste generated from the on-going use of the development is disposed of appropriately.

5.8 BULKY WASTE STORAGE

Secure storage spaces are required to be provided for each residential unit in accordance with the provisions of Council's DCP 2014.

This space may be used to store bulky waste items that can be disposed of as part of any Council Clean Up services to be provided to this complex.

Consistent with these requirements, a secured Bulky Waste Storage Area has been provided for residents to place unwanted materials awaiting collection and removal.

This area is located in the western side of the bin/chute room in Basement 1. It has an area of approximately 113.8sqm (Council's requirement for 62 units is 9.54sqm).

All residents of the building will be provided with unrestricted 24-hour access to this facility.

The Owners Corporation will monitor this area regularly to ensure that all materials stored within its confines are done so in a manner that will not adversely impact on the health, safety and convenience. Regular maintenance of this area will be carried out.

The Owners Corporation will also be responsible for arranging 'Clean Ups' with the Council, to ensure the efficient and regular removal at these materials.

It will be the responsibility of the occupants of individual residential units, to dispose of this material, appropriately.

In accordance with Council requirements, the following infrastructure will be incorporated into the design of all chute and bin rooms, and waste storage and collection areas: -

1. Suitable door access for the service of bins;
2. Where roller doors are provided, an additional service door will be provided inclusive of an Abloy key system;
3. All floors will be finished with a non-slip and smooth and even surface covered at all intersections;
4. The floor will be graded to a central drainage point connected to the sewer;
5. The room will be fully enclosed and roofed with a minimum internal room height in accordance with the BCA 2016
6. The room is to be provided with an adequate supply of water through a centralised mixing valve with hose cock; and,
7. Incorporation of adequate light and ventilation to meet the requirements of the BCA 2016.

5.9 ON GOING OPERATION, USE & MAINTENANCE OF WASTE MANAGEMENT FACILITIES

All waste management facilities will be maintained in a clean and hygienic condition that will promote the principles of health, safety and convenience.

In order to achieve these objectives, the following facilities and devices will be required: -

1. The Chute and Linear Tack Systems will be appropriately maintained in accordance with relevant manufacturers specifications and regular

maintenance programs will be undertaken to ensure the efficient operation of all systems at all times.

2. The walls and floors of all Bin Rooms, Waste Storage and Collection Areas (WSA's) are to be constructed of smooth faced masonry or concrete, and all walls will be painted with light coloured and washable paint.
3. The junction between all floors and walls will be coved and sealed up to 100mm above the floor level, in order to eliminate the build-up of dirt and grime.
4. A floor waste, connected to the Sydney Water drainage system in accordance with that Authority's requirements, will be provided to all WSA's, and the floors will be graded to drain into it.
5. Appropriate washing facilities will be provided to all WSA's, including appropriate plumbing and drainage fixtures and fittings, and the provision of running water.
6. All WSA's will be washed and cleaned on a regular basis.
7. All mobile bins will be washed and cleaned on a regular basis.
8. All electrical equipment, including the provision of lighting, will be installed in accordance with the relevant Australian Standards.
9. Natural and mechanical ventilation will be required to be installed within the WSA's in accordance with the relative provisions of the Building Code of Australia.
10. Appropriate signage will be displayed in both basements clearly identifying waste and recycling bins and the waste storage areas.
11. Appropriate signage will be erected in an appropriate location within the building providing instruction to residents on how to use waste and recycling facilities, including what is and what is not recyclable.
12. The Building Manager / Caretaker will be responsible for the supervision and management of all waste activities and facilities.

PART 6 – SUMMARY

6.1 SUMMARY

In summarising this proposal, the following information is provided:

1. Penrith City Council have insisted that all activities associated with the installation of waste management facilities and the provision of waste management services are to take place in accordance with the requirements of their waste management guidelines for residential flat buildings.
2. This Waste Management Plan has been developed and documented in accordance with the Councils directions.
3. The number and size of bins have been calculated from information provided by Penrith City Council.
4. All waste and recycling services will be provided by Council's respective waste and recycling collection contractors.
5. The Owners Corporation will be responsible for ensuring that all on-going waste management activities are carried out in accordance with the provisions of this Waste Management Plan.

The measures set out in this WMP aim to demonstrate that all such activities will be carried out effectively and efficiently, in a healthy, safe and convenient manner, to acceptable community standards, and to the requirements of Penrith City Council.